**GARIMA VIDYA VIHAR SR. SEC. SCHOOL**



SUMMER VACATION ASSIGNMENT (2023-24)



Grade : XII

 Subject : English

**Q.1)** On behalf of the Principal of your school, draft an advertisement inviting applications for the post of PGT (English Teacher) (In fair notebook)

**Q.2)** Describe “How increasing of Crime” affecting your dreams – and what to do about it. (In fair notebook)

**Q.3)** Write an informal invitation to your friend inviting him/her to the silver wedding anniversary of your parents giving details of the date, time and venue. You are Swati/Ashish. (50 words in fair Copy)

 **Or**

**Q.4)** Write a self composed poetry on the given topics with minimum 4 stanzar.

 **1)** Music 2) I am blessed (In fair Copy)

**fo"k; % fgUnh**

**1½** gfjoa’k jk; cPpu th ds O;fDŸkRo vkSj d`frRo ij izdk’k Mkyrs gq, fp= lfgr ,d vkd"kZd ifj;kstuk cukb,A

**2½** L=h vfLerk dh la?k"kZiw.kZ vkokt ds :Ik es i<+s x, ikB \*HkfDru\* ds vk/kkj ij ukjh l’kfDrdj.k dks] vkd"kZd ifj;kstuk }kjk vfHkO;Dr dhft,A

Subject : Maths

 Q1**.Fill in the blanks-----------**

(i) The number of all possible matrices of order 2 x 3 with each entry 1 or 2 is……………

(ii) The number of all possible matrices of order 2 x 2 with each entry 1,2 or 3 is……………

(iii) For the matrix A = [𝑎**𝑖𝑗**] 2x2, where aij = 22ix *sin jx* ,the element a12 is………….

(iv) If A= $\left[\begin{matrix}0&0\\-2&0\end{matrix}\right]$, the matrix A10 is…………….

(v) If a matrix is both symmetric and skew – symmetric, then it is a ………… matrix.

Q2. **Choose the correct(**√**) option: -------**

(i) If the matrix $\left[\begin{matrix}0&6-5x\\x^{2}&x+3\end{matrix}\right]$ is symmetric, the value of x is

(a) -2,3 (b)2,3 (c) -1,6 (d)1,-6

(ii) If A=$\left[\begin{matrix}α&0\\1&1\end{matrix}\right]$ and B = $\left[\begin{matrix}1&0\\5&1\end{matrix}\right]$, the values of 𝛼 for which A2 = B are

(a) ±1 (b) 4 (c) no value (d)5

(iii) If $\left[\begin{matrix}x+2y&3y\\4x&2\end{matrix}\right]$ = $\left[\begin{matrix}0&-3\\8&2\end{matrix}\right]$, the value of (x-y)is

(a) -3 (b) 3 (c) 2 (d) -1

(iv) If [ 1] $\left[\begin{matrix}1&0\\-2&0\end{matrix}\right]$ = O, the value of x is

(a) -1 (b)1 (c) 2 (d) 0

(v).If A = $\left[\begin{matrix}cosα -&sinα\\-sinα&cosα\end{matrix}\right]$ and A+A’ =I,then value of A is

(a) $\frac{π}{3}$ (b) $\frac{π}{6}$ (c) $\frac{π}{2}$ (d) 0

$$\begin{matrix}0&2y&z\\x&y&-z\\x&-y&z\end{matrix}$$

Q3. Find the values of x, y, z; if the matrix A = obeys the law A’ A = ***I*** .

Q4. If R(Ɵ) = $\left[\begin{matrix}cosθ &sinθ\\-sinθ&cosθ\end{matrix}\right] $, show that R(ɸ). R (ɵ) = R(ɵ + ɸ)

$$\begin{matrix}-1&-8&-10\\3&4&0\\10&20&10\end{matrix}$$

$$\begin{matrix}2&-1\\0&1\\-2&4\end{matrix}$$

Q5. Find the matrix X such that, X = .

Q6 . Find x, if [𝑥 1] $\left[\begin{matrix}1&0\\-2&-3\end{matrix}\right] $ [$ \begin{matrix}x\\3\end{matrix}$ ] = O

Q7. Find a 2 x 2 matrix B such that $\left[\begin{matrix}2&5\\-3&7\end{matrix}\right] $ 𝐵 = $\left[\begin{matrix}17&-1\\47&-13\end{matrix}\right] $ .

$$\begin{matrix}2&0&-1\\5&1&0\\0&1&3\end{matrix}$$

Q8.Find the inverse of the matrix , if exists using elementary operations:

Subject : Physics

**Note down following Practical in your Practical File.**

**{Section – A }**

**1)** To determine resistivity of two/three wires by Plotting a graph for Potential difference

versus current.

**2)** To find resistance of given wire/ standard resister using meter Bridge.

**3)** To verify the law of combination (Series) of resistances using a meter Bridge.

**Or**

 To verity the laws of combination (Parallel) of resistances using a meter Bridge.

4) To determine resistance of a galvanometer by half deflection method and to find its

figure of merit.

**{Section – B}**

**5)** To find the focal length of convex lens by Plotting graphs between u and v or between

 $\frac{1}{u}$ and $\frac{1}{v}$.

**6)** To find focal length of concave lens, using a convex lens.

**7)** To determine angle of minimum deviation for a given Prism by Plotting a graph between angle of incidence and angle of deviation.

**8)** To draw the I-v characteristic curve for P-n junction diode in forward and reverse bias.

**Note down following Activity in your Physics Activity notebook.**

**{Section – A }**

**1)** To measure resistance, voltage (AC/DC) current (AC) and check continuity of a given circuit using multicenter.

**2)** To assemble a house hold circuit comprising three bulbs, three (ON/OFF) switches, a fuse and a power source.

**3)** To assemble the component of given electrical circuit.

**4)** To study length of wire for steady current.

**5)** To identify a diode an LED, a resistor and a capacitor from a mixed collection of such items.

**6)** To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab.

**7)** To observe diffraction of light due to a then slit.

Subject : Chemistry

**All questions are compulsory:**

**Q.1)** Define conductivity and Molar Conductivity for the solution of an electrolyte, Discuss their variation with Concentration.

**Q.2)** What amount of a substances is deposited by 1 coulomb charge? What it is called?

**Q.3)** Write Nernst equation with Mathematical expression.

**Q.4)** State Kohlrausch’s law and its applications.

**Q.5)** Explain Variation of Molar conductivity with concentration.

**Q.6)** Differentiate Electrolytic cell and Galvanic cell?

**Q.7)** Explain SHE.

**Q.8)** Write formation and use of Wheatstone bridge.

**Q.9)** Write Faraday’s first law electrolysis.

**Q.10)** Differentiate strong electrolyte and weak electrolyte.

**Q.11)** Differentiate direct and Indirect redox reactions.

**Q.12)** Write Significance of salt bridge.

Subject : Biology

**All questions are compulsory:**

**Q.1)** Differentiate Monohybrid cross and dihybrid cross.

**Q.2)** How is sex deteamined in humanbeings?

**Q.3)** Which Mendels law of Inheritance is universally acceptable and without any exception?

 State the law.

**Q.4)** Briefly describe the process of Oogenesis.

**Q.5)** How does parturition take place?

**Q.6)** Describe the structure of Grraffian follicles.

**Q.7)** Draw a well labelled diagram of human sperm?

**Q.8)** Discuss changes in human male and female during Puberty.

**Q.9)** What are Leydig Cells? What is their function?

**Q.10)** Describe hormonal control of Male reproductive system.

**Q.11)** What is Menstrual Cycle? Write down the hormonal control over the menstrual cycle.

**Q.12)** Explain the process of fertilization and implantation in humans.

**Q.13)** Explain – IVF , ZIFT , IVI , MTP

**Q.14)** Explain Mendel/s Law of Dominance.

Subject : Computer Science

**1)** Write a Python Program to input a Number and Print its cube?

**2)** Write a Python Program that inputs an integer in range 0-999. and then prints if the integer entered is 1/2/3 digit Number. Use Nested if statements.

**3)** Program that reads a line and print its statistics like:

Number of Uppercase letters :

Number of Lowercase letters :

Number of alphabets :

Number of digits :

**4)** Write a Python Program for Arithmetic operator ( + , - , \* , I , \*\* , II , % ) of two Numbers through a function.

**5)** Write a Program to Calculate Simple Interest using a function interest() that can receive principal amount, time and rate and returns calculated simple Interest.

**Note : Write all Practical in computer Practical file.**

Subject : Physical Education

**Q.1)** Write a short note of – (A) Planning (B) Organising

 (C) Staffing (D) Directing & Controlling (Any three)

**Q.2)** Explain any three Committees and its responsibility.

**Q.3)** Discuss any 2 Pre. During & Post Meet work.

**Q.4)** What is knock-out tournament and its Advantages?

**Q.5)** What is Langue tournament and its disadvantages?

**Q.6)** Draw a knock out fixture of 27 teams with seeding.

**Q.7)** Draw a League fixture of 11 teas with Cyclic methods.

**Q.8)** Make a League cum knock-out fixture of 10 teams.

**Q.9)** What is Extramural & Intramural.

**Q.10)** Explain the objective of Extramural.

**Q.11)** Write a short note of any two Community sports.

Subject : E- Ship

**1)** Start-up India Scheme. **2)** Import and Export procedure. **3)** Join Hindu family business.

**4)** Joint Stock Company **5)** Development and Source of Financial Market.

**Note: 1-** Make 2-3 case study on your topic, with conclusion.

 **2-** The line-up of Index are :

**i)** Topic Introduction **ii)** about the Topic **iii)** 1st Case Study (4-5 pages) **iv)** Conclusion (2 pages)

**v)** 2nd Case Study (4-5 pages) **vi)** Conclusion (2 pages) **vii)** Questioner

Subject : A.I.

**1)** Define AI? Explain Any two Applications of AI?

**2)** What do you mean by Intelligence? How a machine becomes intelligent?

**3)** Write a not on Sophia?

**4)** A driverless car has hit the boy who come in front of it. Considering this as an accident,

who should be held responsible for it. Why ?

**5)** Enlist the various factor affecting Perspective in communication?

**Note : Answer the following questions in your fair AI Note Book.**

**Stay Safe, Stay Healthy & Enjoy your Vacation**